



## The Economic Contribution of the Benefis Health System to Cascade County and its Regional Service Area

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SUBMITTED TO:  
The Benefis Health System  
Great Falls, Montana

### Key Findings:

- While Benefis' payroll and spending alone contribute to 5 percent of all jobs and labor income in Cascade County, the region-wide responses to Benefis' payroll and expenditures account for 10 percent of all jobs and labor income in Cascade County.
- Healthcare is responsible for 14 percent of the gross county product – the broadest measure of economic activity – in Cascade County.
- The healthcare sector accounts for 17 percent of non-farm earnings in the Great Falls Metropolitan Statistical Area, second only to government (including military) at 31 percent of non-farm earnings.
- Healthcare and social assistance employment in Cascade County have increased slightly from 2001 to 2008, while military employment, as a percentage of total employment, has fallen from 8 percent to 7 percent.
- The health care sector in general has served as a stabilizing force in a flat economy. Healthcare is one of only two sectors in Cascade County to show a sizable increase in employment from 2008 to 2009, with a 4.2 percent increase. The other growth area was public administration – jobs such as police officers, correctional workers and fire fighters – which saw a 6.3 percent increase. Education and manufacturing saw employment growth of less than 1 percent, while finance, transportation, construction, food and other areas saw significant drops in employment.
- Basic income is income that drives economic growth. Healthcare accounts for 11 percent of total basic income in Cascade County. Benefis is 6 percent of total basic income in Cascade County. As such, Benefis not only supports jobs and income, but is responsible for new job and income creation in the County.
- Economy-wide, Benefis is responsible for jobs that pay above the average private industry wage.





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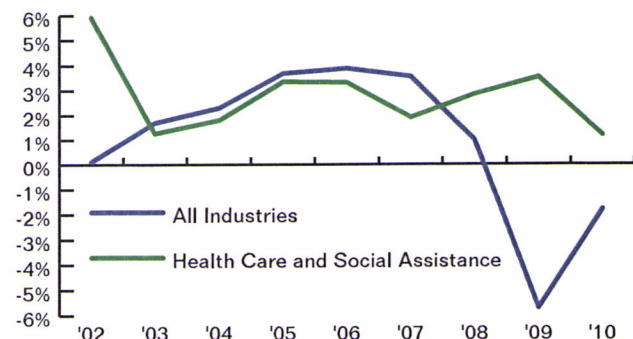
### OVERVIEW

Health care is an important industry not only for its contribution in wages and employment, but also as a catalyst for economic development in general. Access to health care is an important determinant for people and businesses choosing to locate in Montana. Healthy populations are more productive and can direct more dollars to other sectors in the economy, creating jobs and income.

Particularly in a year where health care reform has now become law, it is important to recognize the economic contribution of various industries in the health care industry to the overall welfare and economy of Montana. Because of the labor intensive nature of health care delivery, its contribution to job creation and income generation across all sectors of Montana are noteworthy. Nationally, the health care sector was called the “job-making machine” because of its rapid increase in job creation during the 1980s. To this day, the health care sector continues to grow, providing important jobs and generally above average incomes. Health care’s prominence in relation to the overall total economy has grown over the past several years if for no other reason than the economic slowdown experienced by almost all other industries since the recession began late in 2007. **Figure 1** depicts the annual percentage change in employment for all industries and for health care and social assistance in Montana during the 2001 to 2010 period. The effect of the recession on employment can be readily seen for the years 2007 through 2009. Unlike private employment elsewhere in the economy, health care employment has remained positive throughout the period.

Health care facilities contribute to an economy in many ways. Beyond the obvious contribution of providing access to quality-driven health care and the relatively high- paying jobs associated with it, the economic reach of health care facilities extends to other industries in terms of employment, income,

**Figure 1**  
Percent Change in Annual Private Employment,  
2001 Q1 - 2010 Q1, Montana



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

and sales. These linkages, as health care entities and their employees purchase locally, contribute to the diversification of the economy, creating jobs, income, and increased tax revenues for local and state jurisdictions. Community Benefit Programs also contribute to the community as tax exempt hospitals increasingly offer charity care and many other benefits to the community. These Community Benefit Programs by nature allow dollars to recirculate within the economy that otherwise would be lost. In addition, the influx of out-of-county and out-of-state patients, and their families, contribute to the economic “base” of the economy by attracting dollars from outside the county. Medicare and Medicaid payments to health care entities also provide outside stimulus dollars not otherwise available in the absence of medical providers. In addition to providing jobs that pay well, the health care sector enhances the attractiveness of a region for business relocation and population growth. Studies continually document the importance of health care for relocation decisions for businesses and the retirement age population in particular.





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### OBJECTIVE OF STUDY

This study estimates the economic contribution of the Benefis Health System to sales, labor income, and employment in the Cascade County economy, as well as its 10- county service area<sup>1</sup>. Cascade County serves not only as a hub for medical care, but also as a trade center for retail and financial services. Based on actual expenditure patterns and employment provided by the Benefis Health System, the total economy-wide effects on employment, income, and sales were estimated. The degree to which the Benefis Health System constitutes a “basic” industry is also assessed. Basic industries are the drivers behind economic expansion, as outside dollars provide additional stimulus that dollars churned within simply cannot provide. In addition, local industries in Cascade County that benefit from the presence of the Benefis Health System are identified as part of the system’s contribution to the diversification of the economy.



### BENEFITS OF STUDY

Several potential benefits of the study are noteworthy. First, by understanding the share of the Cascade County economy that the Benefis Health System accounts for, the potential ramifications of changes in health care brought to the forefront by the new health care legislation may be better understood. Second, the demand for health care is expected to explode due to health care reform, an aging baby boomer population, and the advances in technology which extend life. A firm grasp of the baseline will help health care management officials prepare for future demands placed on the health care sector. Third, the health care industry is typically viewed only from the vantage point of hospitals, physicians, long-term care facilities, or ambulatory surgery centers. The industry however extends well beyond these traditional sectors of health care. Today, vocational training programs for health care professionals, medical device manufacturers, and biomedical research and development, to name just three industries, also play an important role in economic development. Identifying these “indirectly” tied sectors to the Benefis Health System illuminates the importance of the Benefis Health System to the Cascade County economy. Finally, recognition of the vital role the Benefis Health System plays to the future vitality of the Cascade County economy elevates this industry’s importance once its full impacts are known.

<sup>1</sup>The ten county service area includes Blaine, Chouteau, Fergus, Glacier, Hill, Liberty, Phillips, Pondera, Teton, and Toole Counties.





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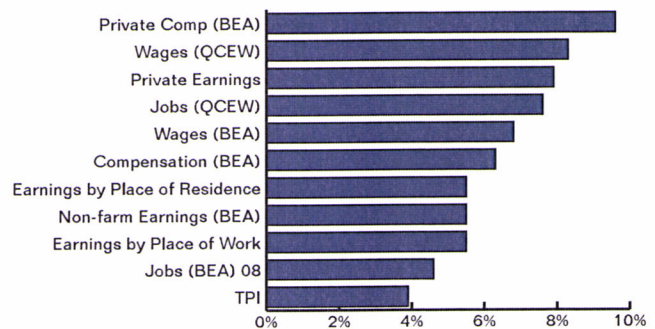
### HEALTH CARE INDUSTRY IN CASCADE COUNTY

There are numerous ways to measure how important an industry, or individual business for that matter, is to a regional economy<sup>2</sup>. **Figure 2** illustrates this point. Figure 2 shows 11 different yardsticks to measure how important the Benefis Health System is to the Cascade County economy. The Benefis Health System share of the Cascade County economy ranges from a low of just under 4 percent of the Cascade County when measured in terms of total personal income, to a high of just under 10 percent of total private compensation. However, when measured against the broadest measure of economic activity, Gross Domestic Product, the health care industry accounts for 14 percent of the Cascade County economy. Even when measuring employment, differences emerge. Employment as measured by the Quarterly Census of Employment and Wages (QCEW) excludes proprietors, or the self-employed. So the Benefis share of total employment will be greater using the QCEW data than when measured against the Bureau of Economic Analysis employment figures that include proprietors. The point then is that one must be careful when comparing impact studies across an industry.

Great Falls' role as a regional medical center can be defined by the proportion of employment directly employed in health care relative to the proportion in health care statewide. **Figure 3** shows the prominence of health care as an industry relative to the Great Falls economy with respect to employment and non-farm earnings. Any index above the numerical value 100 indicates a concentration in employment and earnings above the state-wide average. As easily seen in Figure 3, health care is prominent in the Great Falls economy when measured in employment and earnings.

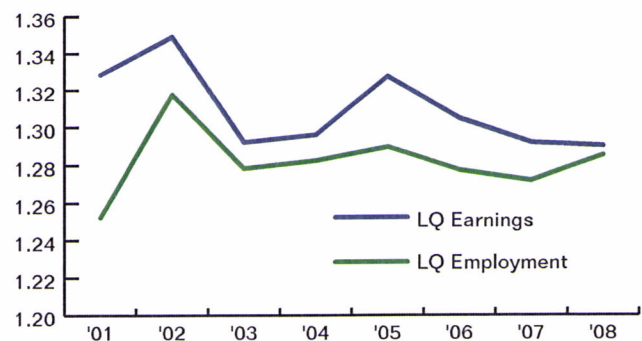
<sup>2</sup>The measures are defined and explained in Appendix 1 of this report.

**Figure 2**  
The Benefis Health System Share of Cascade County Economy, 2009



Source: Bureau of Labor Statistics, Bureau of Economic Analysis.

**Figure 3**  
Health Care Specialization, Great Falls Relative to Montana, Employment and Non Farm Earnings



Source: Bureau of Economic Analysis.





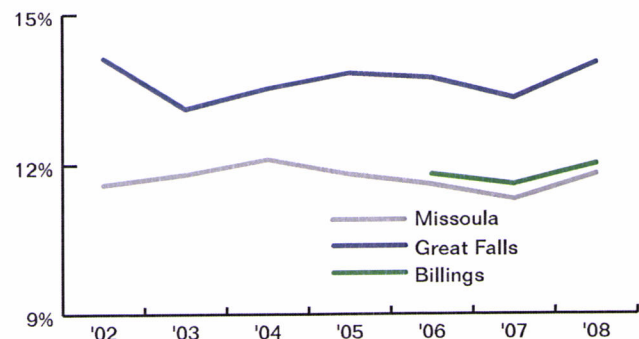
## The Economic Contribution of the Benefis Health System to Cascade County and its Regional Service Area

**Figure 4** compares the relative prominence of the health care industry for Great Falls compared to the two other Metropolitan Statistical Areas (MSA) in Montana, Missoula and Billings. Figure 4 shows the contribution of the health care industry in terms of the MSA's Gross Domestic Product (GDP). Gross Domestic Product is the broadest measure of overall economic activity. Figure 4 demonstrates that health care in Great Falls comprises a larger segment of the economy than is evident for Billings and Missoula, both sizable trade centers.

One other sector in Cascade County that receives frequent recognition in its contribution economically to the economy is the military base. The military base serves as the major contributor to basic income; outside dollars are brought into the economy and re-spent locally creating jobs, sales, and income. But as a direct contributor to the economy, health care is larger in terms of employment and earnings.

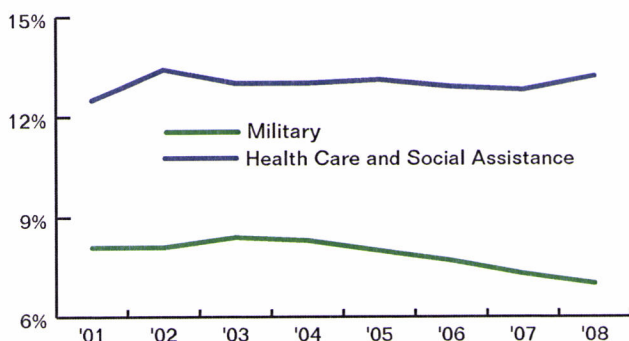
**Figure 5** contrasts the direct employment in health care and the military as a percent of total employment. **Figure 6** shows earnings in health care contrasted with earnings in the military.

**Figure 4**  
Health Care and Social Assistance Share of Total Gross Domestic Product, by Metropolitan Statistical Area



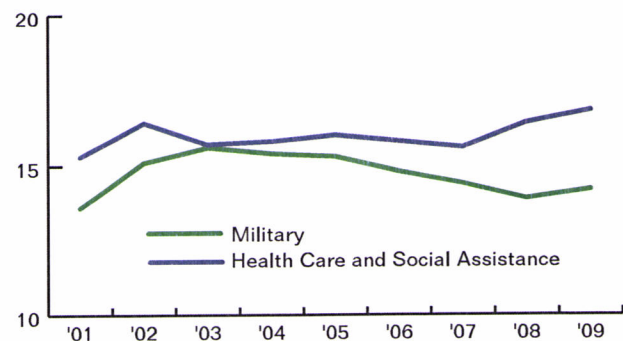
Source: Bureau of Economic Analysis.

**Figure 5**  
Health Care & Social Assistance Employment and Military Employment as Percent of Total Great Falls Employment



Source: Bureau of Economic Analysis.

**Figure 6**  
Health Care and Social Assistance and Military Earnings as a Percent of Total Non-Farm Earnings, Great Falls MSA



Source: Bureau of Economic Analysis.





## The Economic Contribution of the Benefis Health System to Cascade County and its Regional Service Area

Finally, we can view the Benefis Health System share of the local economy with respect to non-farm earnings in the entire health care industry, government, military, and agriculture.

By far the major player in the Great Falls economy is the government, federal, state and local, including the military. Although agricultural earnings appear insignificant, this sector has strong backward linkages in the local economy. When agriculture prospers, many other local segments of the economy pick up as farmers and ranchers purchase new equipment, home furnishings, and automobiles.

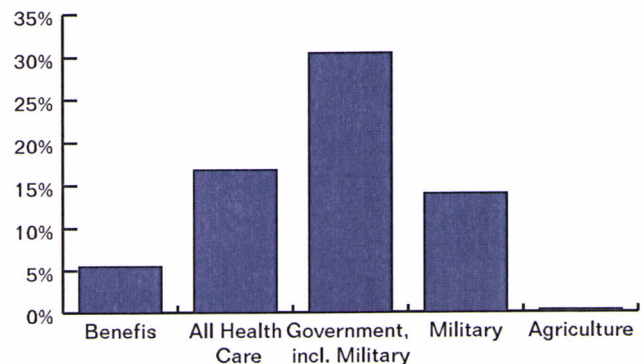
### RESEARCH METHODOLOGY

The Benefis Health System provided detailed data uniquely suited to modeling the economy-wide contribution of the Benefis Health System. The level of detail in the data allowed for unprecedented modeling for impact studies. The data was specifically tailored to the model used in this study, and hence, conservative assumptions used to drive the model could be adopted.

An input-output model, IMPLAN, was used to quantify the total economy-wide impact directly resulting from the operational budget and payroll of the Benefis Health System. IMPLAN is a well-documented and respected model used for a wide array of impact studies. It is the model chosen by the U.S. government to model the employment impacts associated with the American Recovery and Reinvestment Act (ARRA). It has been widely used by industry, government, education, and private sources for over a decade and a half. IMPLAN as a model also provides additional insights as to the industries in Cascade County that “cluster” around the Benefis Health System.

IMPLAN’s major strength in economic analysis is its ability to capture economy-wide impacts resulting from an economic entity’s operations. These effects are captured at any specified level of geographic detail. In this study, the contribution is first constrained to Cascade County, and then later extended to its ten county service area.

**Figure 7**  
Share of Non Farm Earnings, Great Falls, 2009p



Source: Bureau of Economic Analysis.

The employees, their associated wages, and the operating and capital expenditures of the Benefis Health System serve as the immediate or direct effect on the economy. This activity then creates additional economic activity, or the region-wide responses, that result as firms purchase from each other to satisfy the operational and capital needs of the Benefis Health System. Also captured in this study is the economy-wide response to the increased buying power of households resulting from the employment and associated wages paid to local employees. IMPLAN has the ability to estimate all these responses, thus providing a full picture of how the Benefis Health System contributes to the regional economy.

Typically these types of studies focus on two broad modeling parameters- payroll and expenditures. The estimates presented in this study however go well beyond the traditional impact study. Practically all facets of the Benefis Health System could be modeled using relatively conservative assumptions and methodologies.





## The Economic Contribution of the Benefis Health System to Cascade County and its Regional Service Area

### MODELING PARAMETERS

**Table 1** shows the major parameters used to estimate the contribution of the Benefis Health System to both Cascade County and its 10 county regional service area. Payroll includes benefits, and employment includes both full- and part-time workers.

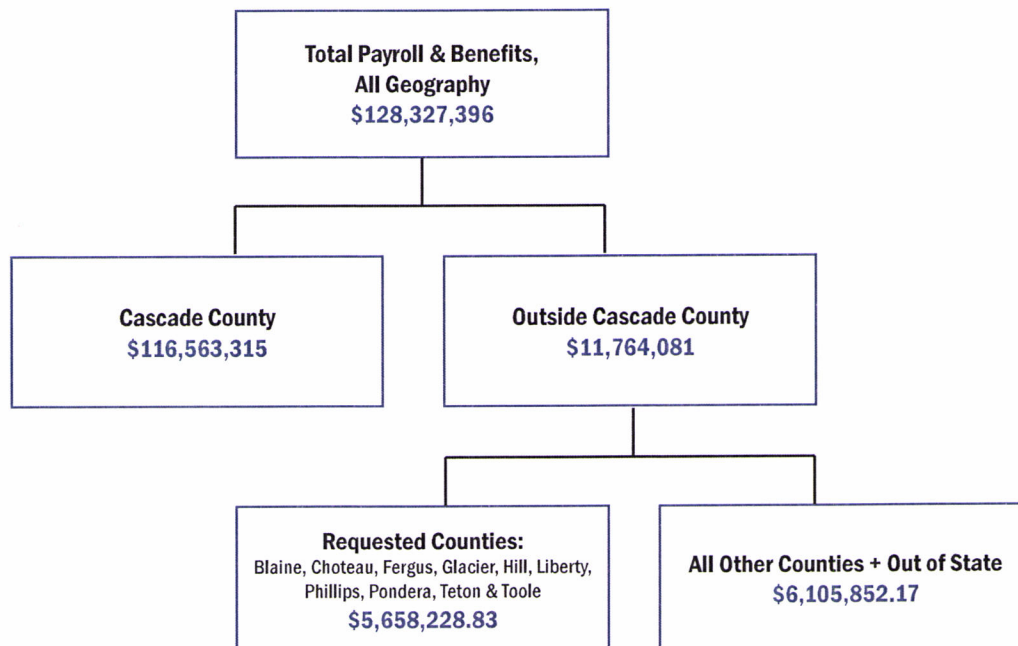
**Figure 8** shows the distribution of payroll for the ten county service area and Cascade County, along with other counties not modeled in this study.

**Table 1**  
The Benefis Health System, 2009  
(dollar amounts in millions)

	All Geography	Cascade County
<b>Payroll</b>	\$128.3	\$116.6
<b>Expenditures</b>	\$129.9	\$55.0
<b>Revenues</b>	\$273.7	\$186.0
<b>Employment</b>	3,011	2,695

Source: Benefis Health System.

**Figure 8**  
Distribution of Benefis Payroll







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A brief snapshot of some of the modeling parameters follows.

**Payroll:** Payroll was modeled by first extracting the payroll of employees living outside Cascade County. Although many of these employees probably purchase a majority of their goods and services in Great Falls, their payroll was excluded. Second, payroll was distributed across occupational categories to better discern average household incomes<sup>3</sup> for modeling purposes. IMPLAN allows this payroll to then be distributed across income class categories to estimate the jobs, labor income, and sales directly attributable to employee household spending. Since income class categories have different expenditure patterns, this approach better estimates the contribution of Benefis Health System employees to the Great Falls economy. Payroll is adjusted for loss of local spending due to imports, savings, and taxes.

**Industry Spending Patterns:** Three broad industry spending patterns directly associated with the Benefis Health System were estimated in this study: hospitals, physician offices, and home health care services.

**Capital Spending:** Capital expenditures modeled were construction, the purchase of out-of-state medical equipment, facility furnishings, and architectural and engineering services.

**Community Benefit:** Using data from the 2009 Tax Benefit Status Worksheet and the 2009 Community Benefit Categories Worksheet for the Benefis Health System, the value of community benefit was determined. Additionally, the loss of state and local tax revenue was also possible to estimate. The modeling involved a two-stage process. First, the loss of state and local tax revenue to the state of Montana and Cascade County were modeled to estimate the job loss associated with foregone tax revenues. Second, the gain in spending power to households in the less than \$10,000 household income class category was modeled, since this income class is the most likely to “walk” away from medical debt. The value of the community benefit was reduced by the proportion of out-of-state and out-of-county inpatients relative to total inpatients to reflect only Cascade County

households where debt forgiveness could result in increased purchasing power elsewhere in the economy.

**Outsourced Management:** Expenditures by outsourced firms were modeled across three IMPLAN sectors, reflecting the contribution of Benefis Health System related operations that are attributable to Benefis but contracted out to other firms.

**Foundation Giving:** Foundation giving to Benefis by Cascade County residents has no net effect on the economy, since dollars are simply redistributed away from other spending opportunities to the Foundation. However, it was estimated that 37 percent of the Foundation giving during 2009 came from out-of-county residents. This expenditure was modeled according to the expenditure pattern for hospitals in general.

**Grants and Contributions:** Out-of-county contributions and grants were allocated to the IMPLAN sector “Grant Making, Giving and Social Advocacy.”

**Conferences:** Out-of-county attendees at Benefis-hosted conferences were assumed to contribute to one night’s lodging and to food services and drinking places for two days. Out-of-county conference attendees were assumed to comprise 32 percent of the total conference participants.

**Volunteer Hours:** Volunteer hours were quantified at minimum wage and the total hours contributed, in this case, 110,000 hours.

**Visitor Spending:** Out-of-county and out-of-state inpatients and outpatients were estimated using data supplied by the Benefis Health System. The potential number of days of visitor spending for each category was estimated using the average length of stay for out-of-state and out-of-county inpatients. Inpatient visitor spending was allocated across lodging, retail gasoline, food and drinking establishments, and general retail. Outpatient visitor spending was allocated only to retail gasoline, food and drinking establishments, and general retail. Expenditures per day were obtained from a 2008 study of the Cincinnati Children’s Hospital Medical Center<sup>3</sup>, and updated to 2009.

<sup>3</sup>The Economic Impact of Cincinnati Children’s Hospital Medical Center on Greater Cincinnati, Economics Center for Education and Research, University of Cincinnati, June 2008.





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**Contract Physicians:** Physicians with privileges at the Benefis Health System were assumed to practice in Great Falls exclusively because of the Benefis Health System. As such, their payroll and expenditures operating their offices and clinics were modeled, assuming only 80 percent of the physicians reside in Cascade County.

### STUDY FINDINGS

**Table 2** below summarizes the direct and economy-wide responses attributable to the Benefis Health System.

Table 2 isolates the contribution of the Benefis Health System to year-to-year ongoing contributions. These impacts occur each year as a result of the Benefis Health System. With respect to employment, over 2,100 jobs are added to the economy, in addition to the nearly 2,700 jobs at Benefis. In addition to the \$117 million payroll at Benefis, another \$68 million in labor income is generated county-wide. Economy-wide the contribution to labor income generates an average wage (\$38,511) well above the state average wage (\$32,247). And finally, the \$186 million in expenditures by Benefis contributes to an additional \$220 million in sales by Cascade County businesses.

The capital spending impact is substantial. **Table 3** presents the estimated contribution of the Benefis Health System as a result of its capital spending during 2009. Over \$24 million was spent on construction activity, almost \$6 million on medical equipment, another \$6 million on furnishings, and over \$1.2 million in architectural and engineering services. Table 3 shows that these expenditures created 242 jobs in Cascade County that were directly associated with the construction activity at Benefis. But this direct activity in construction is responsible for 376 jobs county-wide. Since these jobs are not direct employees of Benefis, all 376 jobs are considered a net contribution to the county job base. Similarly for labor income, \$14 million in labor income is generated county-wide, with average wages well above the statewide average. Finally, construction stimulated over \$44.8 million in sales for Cascade County businesses. This construction activity also benefited government-by adding \$2 million in tax revenue statewide and locally-and another \$2.5 million in federal taxes.

**Table 2**  
Cascade County Impact (all dollar amounts in millions of 2009 dollars, except average wages)

	Benefis Health System	Economy-wide Response	Net Contribution
<b>Employment</b>	2,695	4,799	2,104
<b>Labor Income</b>	\$116.6	\$184.8	\$68.3
<b>Sales</b>	\$186.0	\$406.0	\$220.0
<b>State/Local Taxes</b>	-	-	\$9.3
<b>Federal Taxes</b>	-	-	\$11.8
<b>Average Wage</b>	\$43,252	\$38,511	\$32,440

Source: Benefis Health System, IMPLAN Analysis.

**Table 3**  
Construction-Related Contributions to Cascade County (dollar amounts in millions of 2009 dollars, except average wages)

	Direct	Economy-wide	Net Contribution
<b>Employment</b>	242	376	376
<b>Labor Income</b>	\$9.4	\$14.4	\$14.4
<b>Sales</b>	\$9.4	\$14.4	\$14.4
<b>State/Local taxes</b>	-	-	\$1.9
<b>Federal Taxes</b>	-	-	\$2.5
<b>Average Wage</b>	\$38,989	\$38,271	\$38,271

Source: Benefis Health System, IMPLAN Analysis.





## The Economic Contribution of the Benefis Health System to Cascade County and its Regional Service Area

**Figure 9** summarizes the ongoing and capital spending related contributions to the Cascade County economy directly and indirectly attributable to the Benefis Health System.

The Benefis Health System alone accounts for about 5 percent of the county's employment and labor income base. But accounting for the economy-wide responses as payroll is spent locally and businesses increase sales to accommodate additional demands, the share of the Cascade County economy that the Benefis Health System captures is nearly 10 percent.

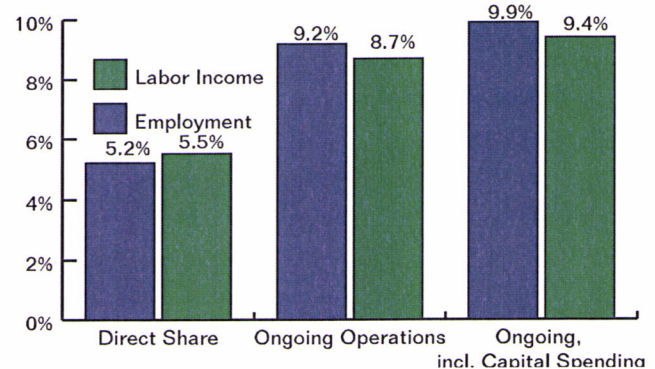
### BENEFIS HEALTH SERVICE AREA CONTRIBUTION

The Benefis Health System service area extends well beyond Cascade County. Following much the same methodology as was used for Cascade County, the Benefis influence on Blaine, Choteau, Fergus, Glacier, Hill, Liberty, Phillips, Pondera, Teton and Toole Counties was estimated.

**Table 4** summarizes the contribution to employment, sales and labor income as a result of the payroll and expenditures of the Benefis Health System in the 10-county area.

While the Benefis Health System contributions are not significant in terms of the share of the entire 10-county service area economic base, any contribution to jobs, sales, and labor income must be appreciated during the recent economic downturn experienced in all of these counties.

**Figure 9**  
Benefis Health System Contribution as Share of Total Cascade Economy



Source: IMPLAN Analysis, Bureau of Economic Analysis.

**Table 4**  
The Benefis Health System Contribution to the Ten County Service Area (dollar amounts in millions of 2009 dollars)

	Benefis Health System	Economy-wide
Employment	144	369
Labor Income	\$5.7	\$12.4
Sales	\$74.9	\$101.1

Source: Benefis Health System, IMPLAN Analysis.





## The Economic Contribution of the Benefis Health System to Cascade County and its Regional Service Area

### ECONOMIC BASE CONTRIBUTION

The Benefis Health System by virtue of being a regional medical center for north central Montana, brings in dollars that otherwise wouldn't come to Cascade County. These dollars provide new jobs, new labor income, and new sales to Cascade County residents. In this case, health care is considered an export, manufactured in Cascade County but sold elsewhere, bringing dollars into the economy from outside the local economy.

This study estimates the proportion of dollars brought in by the Benefis Health System that can be considered basic. **Table 5** demonstrates that nearly 22 percent of all Benefis Health System revenues are basic in nature, originating from sources outside Cascade County. Medicare and Medicaid are the biggest sources of the basic income. The Medicare and Medicaid revenues are net of taxes paid by Montana residents. In other words, the Medicare and Medicaid estimates are in addition to the Medicare and Medicaid taxes paid by Montana residents.

**Figure 10** shows that health care and social assistance revenue accounts for approximately 11 percent of all *basic income* for Cascade County. It is important to remember

Table 5

Non-Montana Dollars Brought in by Benefis Health System (all dollars in millions of 2009 dollars)

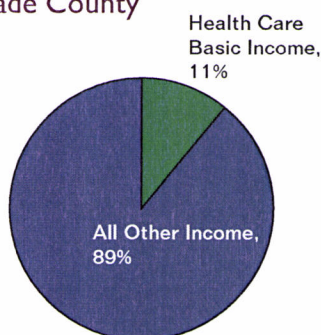
<b>Federal Medicaid &gt; State Medicaid</b>	<b>\$19.0</b>
<b>Out-of-State Patient Revenues</b>	<b>\$4.4</b>
<b>Medicare Revenue &gt; Medicare Taxes</b>	<b>\$15.5</b>
<b>Out-of-State Foundation Revenues</b>	<b>\$0.4</b>
<b>Out-of-State Visitor Revenues</b>	<b>\$0.2</b>
<b>Grants and Contributions</b>	<b>\$0.5</b>
<b>Conference Attendee Revenues</b>	<b>\$0.1</b>
<b>Total Out-of-State Revenues</b>	<b>\$40.1</b>
<b>Total Cascade County Expenditures</b>	<b>\$186.0</b>
<b>Percent Revenues Considered Basic</b>	<b>21.6%</b>

Source: Bureau of Business and Economic Research.

that basic income is income derived from outside sources; in essence, it is the export market for an economy. Other industries that have a basic component are manufacturing, tourism, the military base in Great Falls, and federal employees.

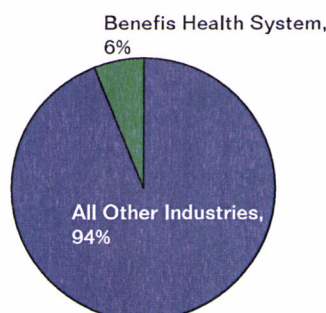
**Figure 11** shows the estimate for the proportion of basic income attributable to the Benefis Health System, based on the data in Table 5.

**Figure 10**  
All Health Care Share of Basic Income, Cascade County



Source: Bureau of Economic Analysis, Bureau of Business and Economic Research.

**Figure 11**  
Benefis Health System Share Basic Income, Cascade County



Source: Bureau of Business and Economic Research.

<sup>4</sup>For a more thorough discussion of basic income and its effect on local economies, the reader is referred to Appendix 2.





## The Economic Contribution of the Benefis Health System to Cascade County and its Regional Service Area

### SUMMARY

This study estimated the contribution of the Benefis Health System in Great Falls to the Cascade County economy, as well as to the 10-county medical service area. In addition, the proportion of revenues that are considered basic were estimated as well. Overall, the Benefis Health System accounts for approximately 10 percent of the Cascade County economy in both employment and total labor income. Health care not only provides residents and businesses with readily available health care, but also provides a stabilizing force in times of economic decline.

The demand for health care will increase as baby boomers qualify for Medicare, one every 8 seconds until the year 2029. Cascade County has more baby boomers as a proportion of its population than does the state or the nation (Figure 12).

Health care in general is also a major purchaser of locally available goods and services. Table 6 identifies the industries that feed into the hospital service sector for every \$1,000,000 in hospital spending. These backward linkages are what constitute the “multiplier” effects associated with the health care sector.

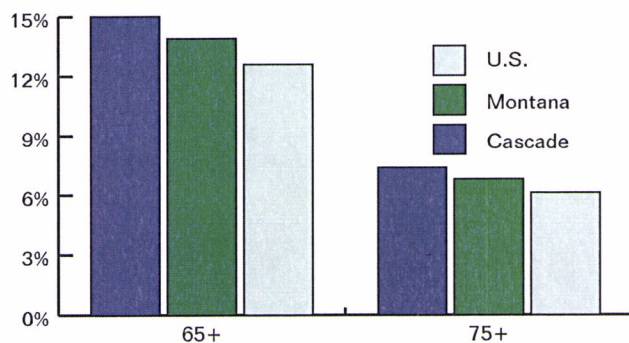
In conclusion, health care is a vital industry to a local economy on a number of fronts. Access to quality health care attracts and retains both residents and businesses, and helps keep the labor force healthier and working. Few would choose

to leave home for needed medical care. From an economic vantage, health care is a provider of jobs and income that typically raises the standard of living by paying wages above private sector averages. And finally, because of the intensive capital and operational needs associated with hospitals, the spillover effects create needed jobs and income in areas hard hit by the recent economic downturn.

**Table 6**  
Average Industry Sales to Support \$1,000,000 in Hospital Expenditures

Management, Scientific & Technical Consulting Services	\$1,122
Business Support Services	\$1,136
Dry Cleaning & Laundry Services	\$1,262
Automotive Equipment Rental & Leasing Services	\$1,342
Other Miscellaneous Professional, Scientific & Technical Services	\$1,611
Water, Sewage Treatment & Other Utility Services	\$1,652
Maintained & Repaired Nonresidential Structures	\$1,690
Electronic & Precision Equipment Repairs & Maintenance	\$1,765
Automotive Repair and Maintenance	\$2,213
Soft Drinks & Manufactured Ice	\$2,281
Employment Services	\$2,771
Office Administrative Services	\$2,882
Truck Transportation Services	\$2,973
Advertising & Related Services	\$3,869
Services to Buildings & Dwellings	\$4,035
Restaurant, Bar and Drinking Places	\$4,350
US Postal Delivery Services	\$4,498
Accounting, Tax Preparation, Bookkeeping, & Payroll Services	\$4,531
Commercial/Industrial Machinery & Equipment Repair and Maintenance	\$5,109
Legal Services	\$5,117
Telecommunications	\$5,351
Securities, Commodity Contracts, Investments & Related Services	\$7,575
Insurance	\$8,917
Electricity & Distribution Services	\$9,046
Management of Companies & Enterprises	\$11,337
Wholesale Trade Distribution Services	\$16,972
Medical/ Diagnostic Labs, Outpatient & Other Ambulatory Care Services	\$26,186
Real Estate Buying, Selling, Leasing, Managing & Related Services	\$58,389

**Figure 12**  
The Boomers are Coming...



Source: American Community Survey, U.S. Census Bureau.

Source: IMPLAN.



## **Appendix 1: Understanding Different Measures of Economic Activity**

(dollar figures are in 000's of 2009 dollars)

Data is reported for the Great Falls Metropolitan Statistical Area, 2009 Preliminary

**Total Personal Income** is reported by place of residence, and is the sum of wages and salaries, supplements to wages and salaries, proprietor's income, rent, interest, dividends and transfer payments, minus contributions to government social insurance. (\$3,017,389)

**Jobs (BEA)** are the number of jobs, full and part-time, by place of work. It includes sole proprietorships and partnerships, but excludes limited partnerships and tax exempt cooperatives. (BEA 2008 = 52,296) Reported for Cascade County.

**Earnings by Place of Work** equal wages and salaries + supplements to wages and salaries + proprietor's income. Since it is presented by place of work it is used as a proxy for the income generated by participation in current production. (\$2,132,576)

**Non Farm Earnings** equal wages and salaries + supplements to wages and salaries + proprietor's income for all industries, excluding farms. (\$2,125,862)

**Earnings by Place of Residence** equal net earnings by place of residence + contributions for government social insurance (\$2,114,076)

**Compensation** equals wages and salaries and supplements to wages and salaries. (\$1,864,005)

**Non Farm Compensation** equals wages and salaries + supplements to wages and salaries for all industries, excluding farm. (\$1,858,454)

**Wages** equal wages and salaries before deductions. (\$1,408,757)

**Jobs (QCEW)** include full and part time workers on the payroll during the pay period including the 12<sup>th</sup> of the month for firms reporting unemployment insurance to the Montana Unemployment Insurance Program. Excludes military, railroad and proprietors. (35,497)

**Private Earnings** include wages and salaries, supplements to wages and salaries, nonfarm proprietor's income, excluding farm and government (\$1,476,634)

**Wages (QCEW)** include wages and salaries, bonuses, profit sharing, commissions, severance pay and limited tips reported by industries under the Montana Unemployment Insurance Program. Excludes military, railroad and proprietors. (\$1,162,237)

**Private Compensation** equals wages and salaries + supplements to wages and salaries excluding farm and government. (\$1,209,226)



**Gross County Product (GCP)** is the sum of all output produced in the county. For the Great Falls metropolitan area, 2008 GCP is \$2.8 billion, Health Care and Social Assistance is \$391 million, or 14% of GCP.

**Adjustment for Residence** is the net inflow of net labor earnings of inter-area commuters. For Great Falls, it is - \$18,500, meaning nearly \$18.5 million of labor income leaves the area.

**Government Social Insurance** is employer, employee, and self-employed contributions to OASDI, hospital insurance, supplemental medical insurance, unemployment insurance, railroad retirement, veteran's life insurance, and temporary disability insurance. (Employer contributions are \$131,892 and employee contributions are \$135,215).

**Transfer payments** consist mainly of government payments to individuals for retirement and disability insurance benefits, Medicare and Medicaid, income maintenance benefits, unemployment insurance benefits, veterans' benefits, Federal grants and loans to students, and business payments to individuals for liability payments for personal injury and corporate gifts to non-profits. (\$589,005)

**Supplements to wages and salaries** are employer contributions to employee pension and insurance funds and government social insurance. (\$455,248)

**Health Care and Social Assistance** is composed of North American Industry Classification System (NAICS) code 62. Included are ambulatory health care services, hospitals, nursing and residential care services, and social assistance.

**BEA** is the Bureau of Economic Analysis, U.S. Department of Commerce.

**QCEW** is the Quarterly Census of Employment and Wages.



## Appendix 2: Why the Distinction Between “Contribution” and “Impact?”

The term “impact” analysis is often over used, perhaps even misused in analyses that quantify industry or firm relationships to an economy. “Impact” is reserved for new sales that originate from changes in sales supported with dollars from outside the region of interest.

The term “contribution” is reserved for the analysis of changes in employment, labor income, and sales due to households spending within their jurisdictions of residence. Each household’s ability to spend is the result of sales from other industries in the region.

Consider an example. Assume we have two households that each derives their income from working at their local Dairy Queens. One household is located in Cascade County, the other in Wyoming. Assume while visiting Giant Springs members of both households receive a serious bee sting, requiring hospital attention. For the Cascade County household, their ability to purchase an hour of hospital service is the result of income earned while working at the Dairy Queen. It’s arguable then that the dollar withdrawn from the Cascade economy is best spent at the hospital, maybe the bee sting should be looked at by their primary care physician instead, or even maybe a shot of Benadryl will suffice, freeing some dollars for purchases from other Cascade County businesses. In either case, the hour of hospital service isn’t really a new demand for hospital services; it is merely reshuffling the way dollars are spent locally. The hospital is *contributing* to the local economy by providing its services.

But it is a whole different story if the Wyoming visitor arrives at the hospital. Their ability to purchase hospital services is the result of income earned in Wyoming; hence Wyoming’s loss of a dollar’s worth of spending power is Cascade County’s gain. The Wyoming visitor created a “new” demand for hospital services; hence it has an *impact* on the local economy.

The same is true of hospital spending in the local economy. It uses locally derived income to purchase goods and services from within the region, hence a dollar taken away from an inpatient yesterday to purchase clean linen today. Other businesses lose a dollar’s worth of sales while the hospital gains a dollar’s worth of sales.

Basic income, on the other hand, is income coming to Cascade County that is primarily earned from labor services (or stock ownership, rental income, interest, etc) from outside the region. It is the stimulus that creates a *new* demand for goods and services, instead of simply reallocating local demands among local businesses.

In a nutshell, new sales come from new demands, which in turn come from new money, or that income from outside the region. Basic industries derive the majority of their sales from demand outside the region, and the corresponding labor income generated locally is then free to create “new” sales for local businesses.



Hospitals and health care in general have a basic component to their operations. Taxes returned in the form of Medicare and Medicaid payments for health services above and beyond what Cascade residents pay in taxes constitutes a true basic component. Additionally, any form of outside visitation (conference attendees, out-of-state inpatients and outpatients, visitors to inpatients, etc.) bring outside money in to the Cascade economy, creating new sales, and hence employment and labor income.